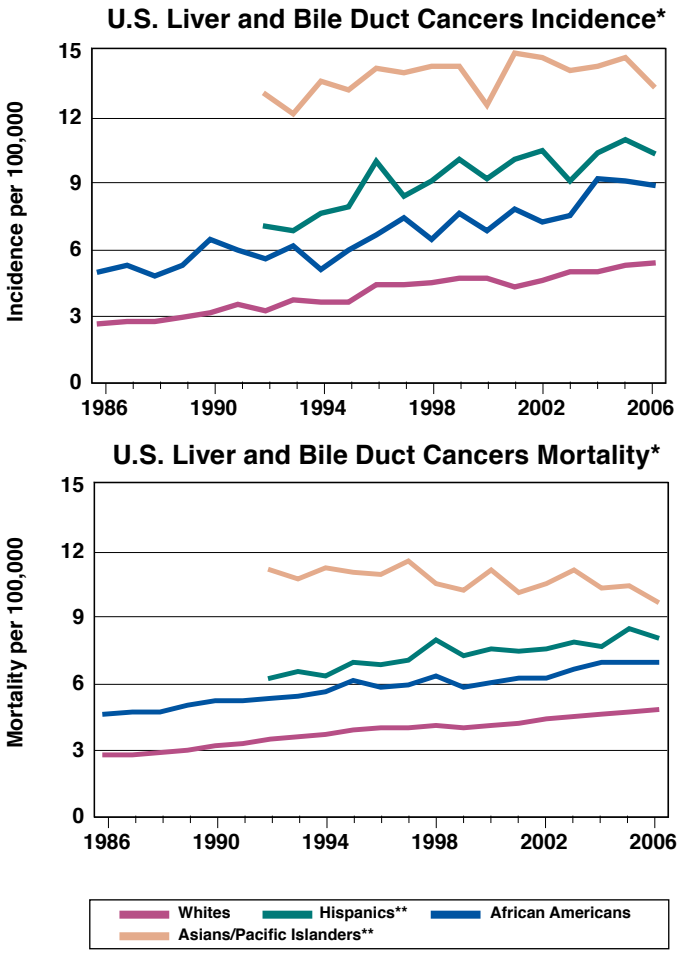
A Snapshot of Liver and Bile Duct Cancers

Incidence and Mortality Rate Trends

Primary liver and bile duct cancers are the sixth most common cause of cancer death in men and the ninth most common cause of cancer death in women. More than 90 percent of all cases occur in men and women age 45 or older. Liver cancer is closely associated with hepatitis virus infections, especially hepatitis B.

The incidence and mortality rates for these cancers have increased in all races and both sexes in the past two decades. Incidence and mortality rates are more than twice as high in men as in women; incidence rates are also about twice as high in African Americans as in whites. Although Hispanics, Asian Americans, and Pacific Islanders have lower incidence rates for cancer in general than whites, they have higher rates of cancers associated with infection, including liver cancer. For example, the incidence rates of liver cancer in Hispanic men and women are twice as high as in whites.

Source for incidence and mortality data: Surveillance, Epidemiology, and End Results (SEER) Program and the National Center for Health Statistics. Additional statistics and charts are available at http://seer.cancer.gov/.



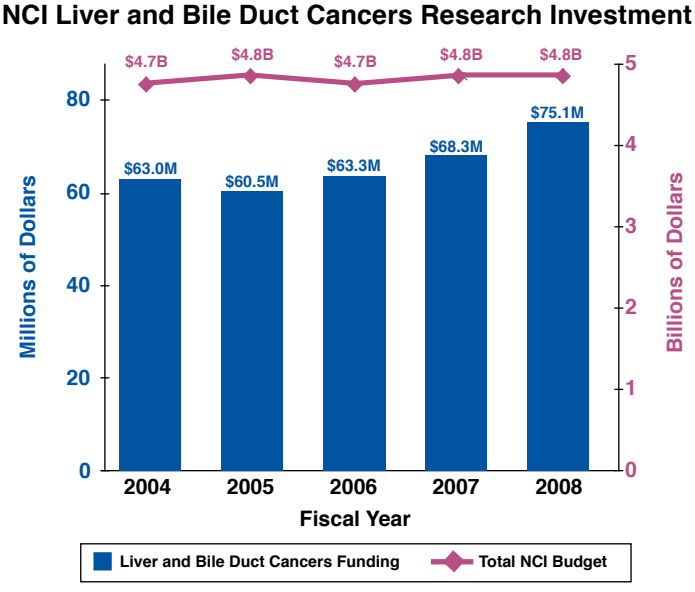
** Significant data for American Indians/Alaskan Natives not available.*
*** Incidence and mortality data not available before 1992.*

Trends in NCI Funding for Liver and Bile Duct Cancers Research

The National Cancer Institute's (NCI) investment[1] in liver and bile duct cancers research increased from $63.0 million in fiscal year 2004 to $75.1 million in fiscal year 2008.

Source: NCI Office of Budget and Finance (http://obf.cancer.gov).

[1]The estimated NCI investment is based on funding associated with a broad range of peer-reviewed scientific activities. For additional information on research planning and budgeting at the National Institutes of Health (NIH), see http://www.nih.gov/about/.

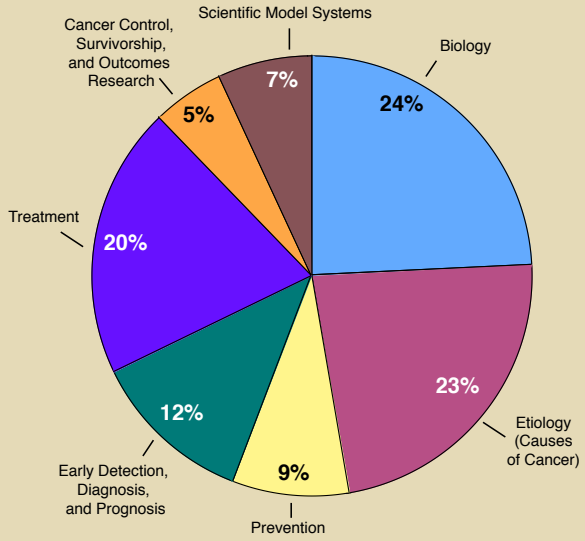


Snapshots can be found online at: http://www.cancer.gov/aboutnci/servingpeople/cancer-snapshots

Examples of NCI Activities Relevant to Liver and Bile Duct Cancers

- NCI's **Patterns of Care/Quality of Care Studies** are evaluating the dissemination of state-of-the-art cancer therapy into community practice and working with professional organizations to develop educational or training opportunities to improve the use of state-of-the-art cancer therapy in community practice. The cancers covered by these studies include cancers of the liver. http://healthservices.cancer.gov/surveys/poc/
- A clinical trial, **Hepatic Arterial Infusion of Melphalan with Hepatic Perfusion in Treating Patients with Unresectable Liver Cancer**, is evaluating the effectiveness of hepatic arterial infusion (delivering chemotherapy directly to the liver) of the drug melphalan combined with hepatic perfusion (delivering chemotherapy to a blood vessel) in patients with liver cancer. http://www.cancer.gov/search/ViewClinicalTrials.aspx?cdrid=391827&protocolsearchid=2993091&version=patient
- The **Etiology, Prevention, and Treatment of Hepatocellular Carcinoma** program supports research on the etiology of liver cancer, development of animal models, novel prevention approaches, identification of reliable predictors of disease progression, and ways to minimize the morbidity and mortality associated with this disease. http://grants.nih.gov/grants/guide/pa-files/PA-08-243.html
- The **Tumor Microenvironment Network (TMEN)** is exploring the role of the microenvironment, the cells and blood vessels that feed a tumor cell, in tumor initiation and progression. Network investigators are examining the role of inflammation and the microenvironment in the development of liver cancer. http://tmen.nci.nih.gov/
- The **What You Need to Know About™ Liver Cancer** booklet contains information about liver cancer diagnosis and staging, treatment, supportive care, and participation in research studies. Information specialists can also answer questions about cancer at 1-800-4-CANCER. http://www.cancer.gov/cancertopics/wyntk/liver
- The **Liver Cancer Home Page** provides up-to-date information on liver cancer treatment, prevention, genetics, causes, screening, testing, and other topics. http://www.cancer.gov/cancertopics/types/liver/

NCI Liver Cancer Research Portfolio*



Percentage of Total Dollars by Scientific Area
Fiscal Year 2008

*Data only available for liver cancer.

Data sources: NCI's Division of Extramural Activities and the NCI Funded Research Portfolio. Only projects with assigned scientific area codes are included. A description of relevant research projects can be found on the NCI Funded Research Portfolio website at http://fundedresearch.cancer.gov

Selected Advances in Liver and Bile Duct Cancers Research

- A new NCI study determined that the **incidence rates of hepatocellular carcinoma tripled** between 1975 and 2005, but the survival rates significantly improved between 1992 and 2005. http://www.cancer.gov/ncicancerbulletin/022409/page3#c
- Development of **hepatocellular carcinoma is associated with a family history** of liver cancer in the United States. http://www.ncbi.nlm.nih.gov/pubmed/19070394
- An enhanced **technique for obtaining gene signatures from chemically preserved tissue samples** may identify liver cancer patients who are at risk of recurrence. http://www.cancer.gov/ncicancerbulletin/NCI_Cancer_Bulletin_102108/page3
- Genomic analysis identified a **set of candidate genes that may be important during development** of liver cancer. http://www.ncbi.nlm.nih.gov/pubmed/18214995